



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

ellr

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
|-----------------|-------------|----------------------|---------------------|

09/342,824 06/29/99 WILK P W07-426

QM32/0914

R NEIL SUDOL
COLEMAN SUDOL
708 THIRD AVENUE
FOURTEENTH FLOOR
NEW YORK NY 10017-4101

EXAMINER

MANTIS MERCADER, E

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3737

2

DATE MAILED: 09/14/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/342,824

Applicant(s)
Wilk

Examiner
Eleni Mantis Mercader

Group Art Unit
3737



☒ Responsive to communication(s) filed on Jun 29, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-28 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-28 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 3737

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Drewes et al.'514.

Drewes et al.'514 teach a method for treating cancer comprising:

detecting a tumor in a patient (col. 5, lines 5-32) and applying mechanical pressure waves to said tumor at a mechanical resonance frequency of said tumor to effectively destroy said tumor (col. 7, lines 13-55).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3737

4. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilk'446 in view of Granz et al.'815 and further in view of Drewes et al.'514.

Wilk'446 teaches the use of a perforated flexible web with electroacoustic transducers attached to the web, an ac current source being connected to the transducer for energizing the transducer with an electrical signal of a pre-established ultrasonic frequency to produce a first pressure wave (col. 8, lines 50-61 and col. 9, lines 39-45) and electroacoustic transducers connected to an analyzing component is attached to the electroacoustic transducer for determining three dimensional shapes of internal organs of the patient by analyzing signals generated by the electroacoustic transducers in response to second pressure waves produced at internal organs of the patient in response to the first pressure wave (col. 8, lines 62-67 and col. 9, lines 1-10) while therapy is performed (col. 11, lines 25-29).

Wilk'446 does not teach the use of transducers for not just detection but also for treatment. Granz et al.'815 teaches the use of transducers not only for detection and imaging but also for treatment (col. 1, lines 64-67 and col. 2, lines 1-67). It would have been obvious to one skilled in the art at the time the invention was made to have used the transducers as taught by Granz et al.'815 in the apparatus of Wilk'446 in order to identify with more precision the area of interest and therefore position exactly the effective region of therapeutic waves (as taught in Granz et al.'815 col. 1, lines 54-59) as well as eliminate the use of invasive probes for treatment.

Wilk'446 in view of Granz et al.'815 do not teach the use of the transducers for detecting resonant frequencies of selected cells and using a destructive frequency for the selected cells as a

Art Unit: 3737

way of treatment. Drewes et al.'514 teach the use of the transducers for detecting resonant frequencies of selected cells and using a destructive frequency for the selected cells as a way of treatment (col. 1, lines 59-68; col. 2, lines 1-68 and col. 3, lines 1-62). It would have been obvious to one skilled in the art at the time the invention was made to have used the transducers of Wilk'446 in view of Granz et al.'815 to detect resonant frequencies of selected cells and use a destructive frequency for the selected cells as a way of treatment as taught by Drewes et al.'514 as an alternative way to treat the area of interest.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rogers et al.'649 teach a noninvasive vibration measurement system and method for measuring amplitude of vibration of tissue in an object being investigated.

Iinum'786 teaches an ultrasonic method and apparatus for tissue characterization and imaging of nonlinear parameter.

Parker et al.'848 teach a method and an apparatus for breast imaging and tumor detection using modal vibration analysis.

Rosenschein et al.'882 teach methods for prevention and treatment of cancer and other proliferative diseases with ultrasonic energy.

Schaetzle et al.'140 teach a therapy apparatus for locating and treating a zone in the body of a life form with acoustic waves.

Art Unit: 3737

6. Any inquiry concerning this communication should be directed to Eleni Mantis Mercader at telephone number (703) 308-0899. The examiner's supervisor, Mr. Marvin Lateef, can be reached on (703) 308-3256.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. The fax phone number for this Group is (703) 308-0758.



Marvin M. Lateef
Supervisory Patent Examiner
Group 3700



EMM
September 10, 2000.